WHAT IS CLAIMED IS:

[Claim 1]

A network system characterized in that:

the network system connects with process portions that can mutually send and

receive a message specified with no destination and a message specified with a specific

process portion and can change their states to either of first and second states, wherein

the network system having:

a first-state process portion that stores the second-state process portion storing

the first-state process portion; and

a second-state process portion that stores the only one first-state process

portion, and wherein

there is one process portion in the first state.

[Claim 2]

A network system according to claim 1 characterized in that:

second-state process portions share information about each other, wherein

one second-state process portion copies information about itself to the first-state

30

process portion, and

another second-state process portion reads information about that second-state process portion from the first-state process portion.

[Claim 3]

A network system according to claim 2 characterized in that:

information describing information for accessing process portions is copied to the first-state process portion for sharing the information describing information for accessing process portions among process portions.

[Claim 4]

A network system according to claim 1 characterized in that:

the network system allows process portions to mutually send and receive the message specified with no destination and the message specified with a specific process portion in a group comprising the first-state process portion and a second-state process portion storing the only first-state process portion, and

the network system allows process portions in different groups to send and receive only the message specified with a specific process portion.

31

[Claim 5]

A network system according to claim 4 characterized in that:

the network system exchanges messages between the first-state process portion in one group and a first-state process portion in another group to determine the only first-state process between the both groups.

[Claim 6]

A network system according to claim 1 characterized in that:

the process portion has error detection means to detect a communication error.

[Claim 7]

A network system according to claim 6 characterized in that:

a first-state process portion removes a second-state process portion from a storage when the first-state process portion detects a communication error with the second-state process portion.

[Claim 8]

A network system according to claim 6 characterized in that:

a second-state process portion changes its state to the first state when the

32

second-state process portion detects a communication error with a first-state process portion.

[Claim 9]

A network system according to claim 1 characterized in that:

the process portion has time lapse detection means for detecting an elapsed time.

[Claim 10]

A network system according to claim 9 characterized in that:

a first-state process portion removes a second-state process portion from a storage when the first-state process portion detects no communication with the second-state process portion for a specified period of time.

[Claim 11]

A network control method characterized in that:

the network control method controls a network system connecting with process portions that can mutually send and receive a message specified with no destination and a message specified with a specific process portion and can change their states to

33

either of first and second states, wherein

a first-state process portion stores the second-state process portion storing the

first-state process portion,

a second-state process portion stores the only one first-state process portion, and

the network contains one first-state process portion.

[Claim 12]

A network control method according to claim 11 characterized in that:

second-state process portions share information about each other, wherein

information about one second-state process portion is copied to the first-state

process portion, and

another second-state process portion reads information about that second-state

process portion from the first-state process portion.

[Claim 13]

A network control method according to claim 12 characterized in that:

process portions share information describing information for accessing process

portions by copying that information to the first-state process portion.

34

[Claim 14]

A network control method according to claim 11 characterized in that:

it is possible to mutually send and receive the message specified with no destination and the message specified with a specific process portion within a group comprising the first-state process portion and a second-state process portion storing the only first-state process portion, and

it is possible to send and receive only the message specified with a specific process portion between process portions in different groups.

[Claim 15]

A network control method according to claim 14 characterized in that:

messages are exchanged between the first-state process portion in one group and a first-state process portion in another group to determine the only first-state process between the both groups.

[Claim 16]

A network control method according to claim 11 characterized in that:

a first-state process portion removes a second-state process portion from a

35

storage when the first-state process portion detects a communication error with the second-state process portion.

[Claim 17]

A network control method according to claim 11 characterized in that:

a second-state process portion changes its state to the first state when the second-state process portion detects a communication error with a first-state process portion.

[Claim 18]

A network control method according to claim 11 characterized in that:

a first-state process portion removes a second-state process portion from a storage when the first-state process portion detects no communication with the second-state process portion for a specified period of time.

[Claim 19]

A signal sender/receiver characterized in that the signal sender/receiver having:

message generation means that can at least generate a message specified with a specific destination and a message specified with no destination;

36

message analysis means that receive a transmitted message and analyze its contents;

state control means that change the signal sender/receiver to a first or second state depending on whether another networked apparatus is available or not and it is in the first or second state; and

storage means that can store information about the signal sender/receiver and other apparatuses;

wherein the signal sender/receiver changes to the second state and stores the only other first-state apparatus storing information about the signal sender/receiver when the other first-state apparatus is connected to the network,

and wherein the signal sender/receiver stores information about another second-state apparatus when the second-state apparatus is connected to the network.

[Claim 20]

A signal sender/receiver according to claim 19 characterized in that:

the signal sender/receiver copies information about itself to the only other first-state apparatus storing information about the signal sender/receiver and reads

37

information about another second-state apparatus stored in the other first-state apparatus as required when the other first-state apparatus is connected to the network.

[Claim 21]

A signal sender/receiver according to claim 20 characterized in that:

the signal sender/receiver copies information describing information for accessing other networked apparatuses to the other first-state apparatus and reads the information describing the access information stored in the first-state apparatus as required.

[Claim 22]

A signal sender/receiver according to claim 21 characterized in that:

the signal sender/receiver can mutually send or receive the message specified with a specific destination and the message specified with no destination when the signal sender/receiver is connected within a group of the first-state apparatus and a second-state apparatus storing the only first-state apparatus or can send or receive only the message specified with a specific destination from an apparatus in a different group.

38

[Claim 23]

A signal sender/receiver according to claim 22 characterized in that:

the signal sender/receiver, when in the first state, exchanges messages with a first-state apparatus in another group to determine the only first-state apparatus between the both groups.

[Claim 24]

A signal sender/receiver according to claim 22 characterized in that:

the signal sender/receiver, when in the second state, transfers a message from a first-state apparatus in another group to a first-state apparatus in a group to which the signal sender/receiver belongs.

[Claim 25]

A signal sender/receiver according to claim 19 characterized in that:

the signal sender/receiver has error detection means for detecting communication errors.

[Claim 26]

A signal sender/receiver according to claim 25 characterized in that:

39

the signal sender/receiver, when in the first state, detects a communication error

with a second-state apparatus to remove the second-state apparatus from a storage.

[Claim 27]

A signal sender/receiver according to claim 25 characterized in that:

the signal sender/receiver, when in the second state, detects a communication

error with a first-state apparatus to change the signal sender/receiver itself to the first

state.

[Claim 28]

A signal sender/receiver according to claim 19 characterized in that:

the signal sender/receiver has time lapse detection means for detecting an

elapsed time.

[Claim 29]

A signal sender/receiver according to claim 19 characterized in that:

the signal sender/receiver, when in the first state, detects no communication

with a second-state apparatus for a specified period of time to remove the second-state

apparatus from a storage.

40